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10/685,901	10/14/2003	David M. Spencer	1400B-000008/US	6261

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EXAMINER	
MURPHY, RHONDA L	

ART UNIT	PAPER NUMBER
2416	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/685,901	SPENCER, DAVID M.	
	Examiner	Art Unit	
	RHONDA MURPHY	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 November 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This communication is responsive to the amendment filed on 11/26/08. Accordingly, claims 1-35 are currently pending in this application.

Response to Arguments

1. Applicant's arguments filed 11/26/08 have been fully considered but they are not persuasive. Applicant argues Kimbrough fails to teach a packet switched backplane. However, Examiner respectfully disagrees. Kimbrough discloses in column 8, lines 45-47, "*These voice signals are then routed over backplane 56 to the appropriate line-cards 52 for conversion to analog signals and transport to the customer premises*." Kimbrough also states in column 7, lines 27-31, *"the uplink card communicates over the auxiliary packet data bus on the backplane of the copper shelf 22 to the various combination voice/DSL line cards 52*, " and further teaches, in column 11, lines 59-62, "*the uplink card 91 then broadcasts this information onto the auxiliary data bus 68 in packet bursts. These packets are routed to the proper line cards 52 and are received by auxiliary bus interface circuitry 108*." Thus, the uplink card 91 and line card communicate via the backplane that switches packets to the proper line card 52. Applicant and Examiner both acknowledge Kimbrough mentions "there is one combination voice/DSL line-card 52 for each customer..." in column 7, lines 11-12. The uplink card 91 (which corresponds to the switch node) is coupled to the *plurality of line cards 52* (which corresponds to the plurality of payload nodes; see Fig. 2: line cards 1 -

48) via the packet switched backplane (backplane 56 of Figure 2). The uplink card 91 broadcasts information onto the data bus 68 in packet bursts. These packets are routed to the *proper* line-card 52; in other words, these packets are routed to the intended payload node (line-card 52) from the packet switched backplane (refer to column 11, lines 59-61).

2. Applicant further argues there is no disclosure that the backplane of each copper shelf 22 includes "a plurality of packet based links", that may be selectively selected by a separate component or subsystem, so that a packet based signal may be selectively routed through the backplane to one or more payload nodes. However, the claim language recites "a packet switched backplane (Fig. 2, "56") having a plurality of packet based links (lines connecting backplane 56 to the line cards 1 to line card 48), the packet switched backplane coupling the switch node (Figure 3; uplink card 91) and the plurality of payload nodes (line cards 1 to 48; Figs. 2 and 3), wherein the data from the DS1/3 signal, as the packet-based signal, is distributed to one or more of the plurality of payload nodes by the packet switched backplane (col. 11, lines 59-62).

3. Applicant also states Kimbrough does not appear to provide selective routing through is backplane 56 to one or more selected customers. However, Examiner respectfully disagrees. Kimbrough describes its uplink card 91 comprising a packet forwarding engine 93 to map the pack-based signal onto a selected one of a plurality of packet based links of the packet switched backplane (col. 10, lines 3-17), to thus enable selective distribution of the packet based signal to a selected one or more of the

payload nodes (col. 10, lines 3-17; further described in col. 11, lines 59-61: packets are routed to the *proper* line card 52; also noted: col. 14, lines 25-34).

4. Thus, it is Examiner's position that the claims limitations have been met and the rejection has been maintained.

Claim Objections

5. Claim1 is objected to because of the following informality:

6. In claim 1, line 10, "pack-based" should be replaced with "packet-based".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1 – 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimbrough (US 6,781,981).

Regarding claims 1 and 10, Kimbrough teaches a multi-service platform system, comprising: a switch node (*Fig. 3; digital data uplink card 91*) coupled to receive a DS1 signal (*col. 11, lines 53-55*), wherein the DS1 signal is translated to a packet-based signal at the switch node (*col.11, lines 59-62*); a plurality of payload nodes (*Figs. 2 and 3: voice/DSL line cards (#1 - #48) 52; col. 7, lines 9-13, 27-31*); and a packet switched

backplane (*Fig. 2; backplane 56; col. 7, lines 27-31*) having a plurality of packet based links (*lines connecting backplane 56 to the line cards 1 to line card 48*), the packet switched backplane coupling the switch node (*Figure 3; uplink card 91*) and the plurality of payload nodes (*line cards #1 to #48; Figs. 2 and 3; col. 7, lines 27-31*), wherein data from the DS1 signal, as the packet-based signal, is distributed to one or more of the plurality of payload nodes by the packet switched backplane (*col. 11, lines 59-62*); and said switch node including a logic unit (*packet forwarding engine 93*) to map the pack-based signal onto a selected one of a plurality of packet based links of the packet switched backplane (*col. 10, lines 3-17*), to thus enable selective distribution of the packet based signal to a selected one or more of the payload nodes (*col. 10, lines 3-17; further described in col. 11, lines 59-61: packets are routed to the proper line card 52; also noted: col. 14, lines 25-34*).

Kimbrough fails to explicitly disclose a DS3 signal. However, Kimbrough does disclose a DS1 signal and further describes use of other electrical signals such as a DS3 signal (col. 6, lines 22-24).

Therefore, it would have been obvious to one skilled in the art to utilize a DS3 signal versus a DS1 signal, in order to transmit and receive data at a higher signal rate.

Regarding claims 2 and 11, Kimbrough teaches the multi-service platform system of claims 1 and 10, wherein the packet-based signal can be one of an InfiniBand, Serial RapidIO and Ethernet packet based signal (col. 7, lines 27-28).

Regarding claims 3 and 12, Kimbrough teaches the multi-service platform system of claims 30 and 10, wherein the switch node receives a plurality of DS1 signals (Fig. 3;

via link 32), and wherein data from two of the plurality of DS1 signals, as the packet-based signal, are distributed over one of the plurality of packet-based links from the switch node to one of the plurality of payload nodes (Fig. 3; over digital packet data bus 68, from digital data uplink card 91 to voice/DSL line card 52; col. 11, lines 53-62).

Kimbrough fails to explicitly disclose a DS3 signal. However, Kimbrough does disclose a DS1 signal and further describes use of other electrical signals such as a DS3 signal (col. 6, lines 22-24).

Therefore, it would have been obvious to one skilled in the art to utilize a DS3 signal versus a DS1 signal, in order to transmit and receive data at a higher signal rate.

Regarding claims 4 and 13, Kimbrough teaches the multi-service platform system of claims 1 and 10, wherein the packet switched backplane is an embedded packet switched backplane (Fig. 2; backplane 56; col. 8, lines 13-18).

Regarding claims 5 and 14, Kimbrough teaches the multi-service platform system of claims 1 and 10, comprising a packet switched backplane, but fails to explicitly disclose the packet switched backplane as an overlay packet switched backplane.

However, Examiner takes official notice that it is well known in the art for systems to include a backplane as an overlay packet switched backplane, for providing an additional backplane that forms connections with various modules for supporting traffic.

Regarding claims 6 and 15, Kimbrough teaches the multi-service platform system of claims 1 and 10, wherein the DS3 signal is processed at one or more of the plurality of payload nodes (col. 11, lines 59-67; col. 12, lines 1-15).

Regarding claims 7 and 16, Kimbrough teaches the multi-service platform system of claims 1 and 10, comprising a packet switched backplane, but fails to explicitly disclose the packet switched backplane as a CompactPCI Serial Mesh backplane.

However, Examiner takes official notice that it is well known in the art for systems to include a CompactPCI Serial Mesh backplane, for the purpose of using a backplane that conforms to the standards of PCI-based industrial systems.

Regarding claims 8 and 17, Kimbrough teaches the multi-service platform system of claims 1 and 10, comprising a packet switched backplane, but fails to explicitly disclose the packet switched backplane as a VMEbus switched serial standard backplane.

However, Examiner takes official notice that it is well known in the art for systems to include a VMEbus switched serial standard backplane, for the purpose of using a backplane that conforms to the VMEbus computer bus standard.

Regarding claims 9 and 18, Kimbrough teaches the multi-service platform system of claims 1 and 10, wherein distribution of the DS3 signal to one or more of the plurality of payload nodes is dynamically remapped (col. 13, lines 66-67; col. 14, lines 1-16).

Regarding claim 19, Kimbrough teaches the same limitations described above in the rejection of claim 10. Kimbrough further teaches a computer-readable medium containing computer instructions for instructing a processor to perform the method of claim 10 (col. 10, lines 12-16).

Regarding claims 20 – 27, Kimbrough teaches the same limitations described above in the rejection of claims 11 – 18, respectively.

Regarding claim 28, Kimbrough teaches the multi-service platform system of claim 1, further comprising: a first packet based interface for switching packets and coupled with the switch node (see Fig. 3; data bus interface); and a plurality of second packet based interfaces for switching packets and each coupled with one of the plurality of payload nodes (see Fig. 2; 54 pin connector), wherein the packet switched backplane is coupled with the first packet based interface and the plurality of second packet based interfaces (see Fig. 2; col. 7, lines 27-31), and the packet switched backplane selectively distributes a packet-based signal received from the first packet based interface to at least one of the plurality of second packet based interfaces (col. 8, lines 13-30; col. 11, lines 59-62).

Regarding claim 29, Kimbrough teaches the multi-service platform system of claim 28 comprising a plurality of first packet based interfaces (see Fig. 3; data bus interface; uplink interface 95).

Regarding claim 30, Kimbrough teaches the multi-service platform system of claim 29, wherein the switch node is coupled with at least two of the plurality of first packet based interfaces (see Fig. 3; data bus interface; uplink interface 95).

Regarding claim 31, Kimbrough teaches the multi-service platform system of claim 28, wherein each of the plurality of payload nodes is coupled with at least two of the plurality of second packet based interfaces (see Fig. 2; 54 pin connector).

Regarding claim 32, Kimbrough teaches the multi-service platform system of claim 3, wherein each of the plurality of packet-based links establishes a dedicated connection between one of the plurality of first packet based interfaces and one of the plurality of

second packet based interfaces (col. 7, lines 10-11; dedicated connection for each customer).

Regarding claim 33, Kimbrough teaches the multi-service platform system of claim 1, wherein each of the plurality of payload nodes further comprises a gasketing logic unit for translating a received packet-based signal to a second DS1 signal (Fig. 3; PSK packet transceiver 90; col. 10, lines 29-45).

Kimbrough fails to explicitly disclose a DS3 signal. However, Kimbrough does disclose a DS1 signal and further describes use of other electrical signals such as a DS3 signal (col. 6, lines 22-24).

Therefore, it would have been obvious to one skilled in the art to utilize a DS3 signal versus a DS1 signal, in order to transmit and receive data at a higher signal rate.

Regarding claim 34, Kimbrough teaches the multi-service platform system of claim 33, wherein each of the plurality of payload nodes further comprises a processor for processing the second DS1 signal (Fig. 4; FPGA).

Kimbrough fails to explicitly disclose a DS3 signal. However, Kimbrough does disclose a DS1 signal and further describes use of other electrical signals such as a DS3 signal (col. 6, lines 22-24).

Therefore, it would have been obvious to one skilled in the art to utilize a DS3 signal versus a DS1 signal, in order to transmit and receive data at a higher signal rate.

Regarding claim 35, Kimbrough teaches the multi-service platform system of claim 1, a switch node coupled to receive a DS1 signal, wherein the DS1 signal is translated to a second packet-based signal at the switch node, the packet switched backplane is

coupled with the switch node, and the data from the DS1 signal, as the second packet-based signal, is selectively distributed to one or more of the plurality of payload nodes by the packet switched backplane (as described above in the rejection of claim 28).

Kimbrough fails to explicitly disclose a second switch node couple to receive a third DS3 signal.

However, Kimbrough does disclose *at least one* switch node (at least one data uplink card in col. 2, lines 56-57).

Thus, it would have been obvious to one skilled in the art to include a second switch node, in order to provide DSL data services in the system and further, perform the above functions with a second switch node, for the purpose of transporting DSL data services between line cards within the system.

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RHONDA MURPHY whose telephone number is (571)272-3185. The examiner can normally be reached on Monday - Friday 9:00 - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Rhonda Murphy
Examiner
Art Unit 2416

/R. M./

Examiner, Art Unit 2416

/Kevin C. Harper/
Primary Examiner, Art Unit 2416